



PTO/PCT Rec'd

09913569 081301

27 AUG 2002

#1

## SEQUENCE LISTING

<110> Krebbers, Enno  
Weng, Zude  
Cahoon, Rebecca

<120> Plant Viral Movement Protein Genes

<130> BB1344

<140> 09/913,569

<141> 2001-12-17

<150> 60/128,092

<151> 1999-04-07

<160> 56

<170> Microsoft Office 97

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<211> 450

<212> DNA

<213> Vitis sp.

<220>

<221> unsure

<222> (445)

<223> n = A, C, G or T

<400> 1

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gattttgtgg gagaagcaac cattccacta gaggcactct tcacggaagg aagcctggag 360
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<211> 130

<212> PRT

<213> Vitis sp.

<220>

<221> UNSURE

<222> (129)

<223> Xaa = any amino acid

<400> 2

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      20           25           30
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Cys Arg Thr Gln Glu Gln Lys Ser Ser Val Ala Ser Gly Lys Gly Ser
      35           40           45
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Asp Pro Glu Trp Asn Glu His Phe Val Phe Thr Ile Ser Glu Gly Ile
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50

55

60

Ser Glu Leu Thr Ile Lys Ile Met Asp Ser Asp Ser Gly Ser Gly Asp  
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Asp Phe Val Gly Glu Ala Thr Ile Pro Leu Glu Ala Leu Phe Thr Glu  
85 90 95

Gly Ser Leu Glu Pro Ser Thr Gly Thr Met Leu Leu Lys Thr Lys Glu  
100 105 110

Tyr Cys Gly Glu Ile Lys Val Gly Leu Thr Phe Thr Gln Lys Gly Lys  
115 120 125

Xaa Asp  
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<211> 916  
<212> DNA  
<213> Zea mays

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ggcgagttgg gttgggtcta tctcgcaatc gaggcgtttt ttttctgctt cgtaagttcg 180  
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gcaggcagtc gctttatgat tcagaagcaa acgacggatc gattcccttg atgtatgca 720  
gtccagttag cgtgcatcta caactttag aagaagcctg caacatgac acgggatcct 780  
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<211> 129  
<212> PRT  
<213> Zea mays

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Glu Asn Thr Asp Tyr Leu Ser Asn Met Asp Pro Tyr Ala Leu Leu Gln  
20 25 30

Cys Arg Ser His Glu Gln Lys Ser Ser Val Ala Ser Gly Lys Gly Cys  
35 40 45

Glu Pro Glu Trp Asn Glu Thr Phe Val Phe Thr Val Ser Asp Gly Ala  
50 55 60

Ala Glu Leu Phe Ile Lys Leu Leu Asp Ser Asp Gly Gly Thr Asp Asp  
65 70 75 80

Arg Ser Ile Pro Pro Thr Leu Tyr Asn Val Val Lys Gly Glu Lys Tyr  
100 105 110

Cys Gly Glu Ile Lys Val Gly Leu Thr Phe Thr Pro Glu Asp Thr Arg  
 115 120 125

Gln Arg Gly Leu Pro Glu Asp Phe Gly Gly Trp Lys Gln Ser Ser  
 130 135 140

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 <212> DNA  
 <213> Hevea brasiliensis

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 <223> n = A, C, G or T

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 ttaagtcttt tctttttcgc tttttggatt caattctggt ccaaaaatgc ctctaggaac 180  
 tggtgaagtc ctacttggtg gtgctaaggg tcttgaaaac actgattttc tcaatggcgt 240  
 ggacccttat gtcgtcctcg cttgccgtac ccaggagcag aaaagcagtg ttgcttcagg 300  
 gaaagggagt gaaccagaat ggaatgagaa attctcattt gaggtatcag atggtgacac 360  
 agaactcaca ttgaaaatca tggacagtga tggttggtgct gcagatgatt ttgttgagaga 420  
 agcaaccatt ccccttgagc cattgttttt ggaaggaaac ctcccatcta cggcgtacaa 480  
 agttgtcaaa gaacaagaat acaagggaga gattacagtg ggcctcacct tcaccccgaga 540  
 ggtagagatg gacaacgtcg gagtggatgg atacgatttt cggttataat attaactagc 600  
 atcttggtgt ggaaatggca aggactgctt ttggtttgga gatggcaaaa gagactccgt 660  
 ttttaacgtc natgttggtt ttgaaaactt ggtttttgat gtttgcaaaa aatacccgat 720  
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<210> 8  
 <211> 140  
 <212> PRT  
 <213> Hevea brasiliensis

<400> 8  
 Met Pro Leu Gly Thr Val Glu Val Leu Leu Val Gly Ala Lys Gly Leu  
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Glu Asn Thr Asp Phe Leu Asn Gly Val Asp Pro Tyr Val Val Leu Ala  
20 25 30

Cys Arg Thr Gln Glu Gln Lys Ser Ser Val Ala Ser Gly Lys Gly Ser  
35 40 45

Glu Pro Glu Trp Asn Glu Lys Phe Ser Phe Glu Val Ser Asp Gly Asp  
50 55 60

Thr Glu Leu Thr Leu Lys Ile Met Asp Ser Asp Val Gly Ala Ala Asp  
65 70 75 80

Asp Phe Val Gly Glu Ala Thr Ile Pro Leu Glu Pro Leu Phe Leu Glu  
85 90 95

Gly Asn Leu Pro Ser Thr Ala Tyr Lys Val Val Lys Glu Gln Glu Tyr  
100 105 110

Lys Gly Glu Ile Thr Val Gly Leu Thr Phe Thr Pro Glu Val Glu Met  
115 120 125

Asp Asn Val Gly Val Asp Gly Tyr Asp Phe Arg Leu  
130 135 140

<210> 9

<211> 874

<212> DNA

<213> Triticum aestivum

<400> 9

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catataattc ctgatcgagc gagecgggaga ggaaggecag atcaggcccg gagagaagat 180
ggcgcagggg acgctggagg tgctgctcgt gggagccaag ggccctcgaga acaccgacta 240
cctctgcaac atggacccgt acgcggttct aaaatgcacc tcgcaggagc aaaagagcac 300
cgtcgcctct ggaaagggaa gtgatcctga gtggaacgaa acctttgtgt tcaccgctc 360
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cagcgttggg gaagcaacga tcccattgga tggagtgtac actgaaggaa gcatcccacc 480
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gttcaactcc gaggaggctc gtgatcagga tcaacccgag gaaaactatg gtgggtggaa 600
ccaatcatct tgagaagaag caggtgcttt gctgaactat ggtgcgtgac aagtcgtgtg 660
ctagaactaa agcctatatt aattgttaaa gactgtatgt gtcgttgatt cctcaatta 720
tgataagct acgaatctac ttattgattg gtatcgtttt ctaatatcca aatttgtaat 780
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aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 874
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<210> 10

<211> 144

<212> PRT

<213> Triticum aestivum

<400> 10

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20 25 30

Cys Thr Ser Gln Glu Gln Lys Ser Thr Val Ala Ser Gly Lys Gly Ser  
35 40 45

Asp Pro Glu Trp Asn Glu Thr Phe Val Phe Thr Val Ser Glu Asn Ala  
 50 55 60  
 Thr Glu Leu Val Ile Lys Leu Leu Asp Ser Asp Gly Gly Thr Asp Asp  
 65 70 75 80  
 Asp Ser Val Gly Glu Ala Thr Ile Pro Leu Asp Gly Val Tyr Thr Glu  
 85 90 95  
 Gly Ser Ile Pro Pro Thr Val Tyr Asn Val Val Lys Asp Glu Glu Tyr  
 100 105 110  
 Arg Gly Glu Ile Lys Ile Gly Leu Thr Phe Thr Pro Glu Glu Ala Arg  
 115 120 125  
 Asp Gln Asp Gln Pro Glu Glu Asn Tyr Gly Gly Trp Asn Gln Ser Ser  
 130 135 140

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 <211> 1482  
 <212> DNA  
 <213> *Oryza sativa*

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 catatgctgc cccctcacct tcatacgcac taccctctgc aggataccct gcagtaccgc 600  
 catatcaatc ctatcctgct agccatgtcc cggcgccata tcctacttca gcataccac 660  
 atccaccacc atctctgcta gctcgcgatg ttgagcatgc ggcataccct cctacaagta 720  
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 <211> 308  
 <212> PRT  
 <213> *Oryza sativa*

<400> 12  
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Ile Glu Tyr Ala Thr Asn Lys Phe Arg Thr Arg Thr Cys Thr Asp Gly  
           35                          40                          45  
 Gly Arg Asn Pro Thr Phe Asp Glu Lys Phe His Ile Pro Leu Ile Glu  
           50                          55                          60  
 Gly Leu Arg Glu Leu Thr Val Thr Val Trp Asn Ser Asn Thr Leu Thr  
           65                          70                          75                          80  
 His Asp Asp Phe Ile Gly Asn Gly Arg Val Gln Leu His Lys Val Leu  
                           85                          90                          95  
 Thr Arg Gly Tyr Asp Asp Ala Ser Trp Pro Leu Gln Thr Arg His Met  
                           100                          105                          110  
 Arg Ser Ala Gly Glu Val Thr Leu Ile Met His Phe Asp Val Ser Ala  
                           115                          120                          125  
 Met Lys Asn Lys Pro Gly Lys Ile Ser Ala Ala Ser Thr Thr His Ser  
           130                          135                          140  
 Val Leu Pro Val Pro Val Pro Ala Val Pro Tyr Ala Ala Pro Ser Pro  
           145                          150                          155                          160  
 Ser Tyr Ala Leu Pro Pro Ala Gly Tyr Pro Ala Val Pro Pro Tyr Gln  
                           165                          170                          175  
 Ser Tyr Pro Ala Ser His Val Pro Ala Pro Tyr Pro Thr Ser Ala Tyr  
                           180                          185                          190  
 Pro His Pro Pro Pro Ser Leu Leu Ala Arg Asp Val Glu His Ala Ala  
                           195                          200                          205  
 Tyr Pro Pro Thr Ser Thr Thr Tyr Pro Pro Gln Pro Tyr Pro Pro Gln  
           210                          215                          220  
 Pro Gln Gly Gln Thr Tyr Pro Pro Gln Pro Gln Gly Glu Thr Tyr Gln  
           225                          230                          235                          240  
 Pro Gln Pro Gln Arg Glu Thr Tyr Pro Pro Gln Pro Gln Val Gln Pro  
                           245                          250                          255  
 Tyr Pro Pro Lys Pro Gln Gly Gln Pro Tyr Pro Pro Gln Pro Gln Gly  
                           260                          265                          270  
 Gln Pro Tyr Pro Pro Gln Pro Tyr Gly Gln Thr Tyr Pro Pro Pro Pro  
                           275                          280                          285  
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<210> 13  
 <211> 1172  
 <212> DNA  
 <213> Glycine max

<400> 13

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aaaaaaaaac aaaaaaaaaa aaaaaaaaaa aa 1172

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 <211> 258  
 <212> PRT  
 <213> Glycine max

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 Pro Tyr Val Cys Val Glu Tyr Gly Ser Thr Lys Phe Arg Thr Arg Thr  
 35 40 45  
 Cys Thr Asp Gly Gly Lys Asn Pro Val Phe Gln Glu Lys Phe Ile Phe  
 50 55 60  
 Pro Leu Ile Glu Gly Leu Arg Glu Leu Asn Val Leu Val Trp Asn Ser  
 65 70 75 80  
 Asn Thr Leu Thr Phe Asp Asp Phe Ile Gly Ser Gly Lys Ile Gln Leu  
 85 90 95  
 His Lys Val Leu Ser Gln Gly Phe Asp Asp Ser Ala Trp Pro Leu Gln  
 100 105 110  
 Thr Lys Thr Gly Arg Tyr Ala Gly Glu Val Lys Val Ile Leu His Tyr  
 115 120 125  
 Ala Ile Ala Asn Gln Arg His Lys Leu Val Ser Gly His Ala Pro Ser  
 130 135 140  
 Ala Pro Pro Tyr Val Ala Thr Ala Thr Pro Pro Val Pro Ser Ser Tyr  
 145 150 155 160  
 Ser Thr Ser Tyr Pro Pro Pro Pro Ser Ala Thr Ser Tyr Pro Pro Pro  
 165 170 175  
 Pro Ser Pro Pro Ser Ala Thr Pro Tyr His Thr Thr Gly Ser Tyr Ser



180

185

190

Tyr Pro Pro Pro Pro Pro Pro Pro Thr Ala Tyr Pro Pro Tyr Ser Ser  
195 200 205

His Ser Ser Pro Tyr Pro Pro Ser Ser Tyr Pro Pro Gln Pro Ser Ser  
210 215 220

Tyr Pro Pro Pro Pro Pro Pro Ser Ser Tyr Pro Pro Ala Ser Ala Tyr  
225 230 235 240

Pro Tyr Pro Pro Pro Ala Gly Tyr Pro Ser Gly Ile Tyr Pro Pro Pro  
245 250 255

Pro Tyr

<210> 15  
<211> 757  
<212> DNA  
<213> Zea mays

<400> 15  
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cgtggactct ctcaagttct ttggttgctt ggtggtgttt cgggttggat gtagtttttg 660  
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<211> 157  
<212> PRT  
<213> Zea mays

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Tyr Arg Ser Gln Glu Arg Lys Ser Ser Val Ala Arg Asp Gln Gly Arg  
35 40 45  
Asn Pro Cys Trp Asn Glu Val Phe Lys Phe Gln Ile Asn Ser Ala Ala  
50 55 60  
Ala Asn Val Gln His Lys Leu Ile Leu Arg Ile Met Asp His Asp Asn  
65 70 75 80  
Phe Ser Ser Asp Asp Phe Leu Gly Glu Ala Thr Ile Asp Val Thr Asp  
85 90 95

Ile Val Ser Leu Gly Ala Glu Arg Gly Thr Tyr His Leu Asn Ala Ala  
                   100                  105                  110

Lys His Asn Val Val Leu Ala Asp Lys Thr Tyr His Gly Glu Ile Lys  
                   115                  120                  125

Val Ala Ile Thr Phe Thr Ser Thr Gln Thr Gln Val Gln Glu Asp Gly  
                   130                  135                  140

Gly Ala Ile Gly Gly Trp Arg His Ser Ser Phe Asn Gln  
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 <213> Hevea brasiliensis

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 <222> (410)  
 <223> n = A, C, G or T

<220>  
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 ctgggctatt ggaagtgcag ctggtgaatg caaaaggcct cagaggcact gatttcttag 180  
 gtaagattga tccatatgtt atcgtgaagt acaaaaacca agagcgcgag agcagtgtcg 240  
 ccagaggtca aggtgggaat ccagtgtgga atgagaaact cacattcaag gtggaatato 300  
 cagggcaagg tgaagagtac aagctcattt taaaaatcat ggacaaggac accttctctg 360  
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<210> 18  
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 <212> PRT  
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Arg Gly Thr Asp Phe Leu Gly Lys Ile Asp Pro Tyr Val Ile Val Lys  
                   20                  25                  30

Tyr Lys Asn Gln Glu Arg Glu Ser Ser Val Ala Arg Gly Gln Gly Gly  
           35                  40                  45

Asn Pro Val Trp Asn Glu Lys Leu Thr Phe Lys Val Glu Tyr Pro Gly  
 50 55 60

Gln Gly Glu Glu Tyr Lys Leu Ile Leu Lys Ile Met Asp Lys Asp Thr  
 65 70 75 80

Phe Ser Ala Asp Asp Leu Leu Gly His Ala Thr Ile Tyr Val Lys Asp  
 85 90 95

Leu Leu Xaa Leu Xaa Met  
 100

<210> 19  
 <211> 486  
 <212> DNA  
 <213> Glycine max

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 <222> (430)  
 <223> n = A, C, G or T

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 <222> (486)  
 <223> n = A, C, G or T

<400> 19  
 agaagaatag aatcttcaga gacatggcaa ttgggttcat ggaggtgcag cttgtgaaag 60  
 caaaaggcct gcgagacact gatatttttg gtaaaatgga tccctatggt ctgatacaat 120  
 acaaaggcca agagaagagg agtgggtgtcg ctaatggcaa aggcaaaaat ccggtatgga 180  
 atgagaaatt tatcttcaaa gtagaatatc ctggatcaag caatcaacac aagctcatcc 240  
 tcaaaattat ggataaagac ttatatacag acgacttcgt cggagaagca ataattccatg 300  
 taggggattt attggcccaa ggagtagaga acggaggagc caaattacag actctcaagt 360  
 atagagtggg tcgtgctaac aagtottatt gtgggtgaaat tgatggtggg tgttactttt 420  
 accccgaaan gtgggaagac aaattttgtg ggaagaagac atangaggat ggaaaagaaa 480  
 gtgaacn 486

<210> 20  
 <211> 154  
 <212> PRT  
 <213> Glycine max

<220>  
 <221> UNSURE  
 <222> (136)  
 <223> Xaa = any amino acid

<220>  
 <221> UNSURE  
 <222> (147)  
 <223> Xaa = any amino acid

<400> 20  
 Met Ala Ile Gly Phe Met Glu Val Gln Leu Val Lys Ala Lys Gly Leu

1	5	10	15
Arg Asp Thr Asp Ile Phe Gly Lys Met Asp Pro Tyr Val Leu Ile Gln			
20	25	30	
Tyr Lys Gly Gln Glu Lys Arg Ser Gly Val Ala Asn Gly Lys Gly Lys			
35	40	45	
Asn Pro Val Trp Asn Glu Lys Phe Ile Phe Lys Val Glu Tyr Pro Gly			
50	55	60	
Ser Ser Asn Gln His Lys Leu Ile Leu Lys Ile Met Asp Lys Asp Leu			
65	70	75	80
Tyr Thr Asp Asp Phe Val Gly Glu Ala Ile Ile His Val Gly Asp Leu			
85	90	95	
Leu Ala Gln Gly Val Glu Asn Gly Gly Ala Lys Leu Gln Thr Leu Lys			
100	105	110	
Tyr Arg Val Val Arg Ala Asn Lys Ser Tyr Cys Gly Glu Ile Asp Val			
115	120	125	
Gly Cys Tyr Phe Tyr Pro Glu Xaa Trp Glu Asp Lys Phe Cys Gly Lys			
130	135	140	
Lys Thr Xaa Glu Asp Gly Lys Glu Ser Asp			
145	150		

<210> 21  
 <211> 862  
 <212> DNA  
 <213> Glycine max

<400> 21  
 ttattagaca ttaaattgta agaattttgc tgacttgtaa gcttcagaga cgaagacaca 60  
 cggtttagagt gagaaagaga tggcaattgg gttcatggag gtgcagcttg tgaaagcaaa 120  
 ggagttgtgt gacactgatt tctttggtag tatggaccgg tatgttgtga tacaatacaa 180  
 cggccaagag caaaggagta gtgttgctaa gggacagggc aataatccgg tatggaatga 240  
 gaaattttgtg ttcaaggtag aatatcctac actgagtaat tcatacaaga ttatcttaaa 300  
 aatcatggac aaggatcttt tatctgcaga tgactttggt ggtcaagcca tagtctatgt 360  
 ggaagattta ttagccatag gggtagagga tgggtcggct gagctacaac ctctaaagta 420  
 cagagtaatt cgtgcagatc aatcttattg tggagaaatt gatcttggtg taacttttaa 480  
 ggtggaagaa gagttcaatg gagaagctaa acgaggatcg aaggacagta aatagtattt 540  
 gcaatagcag ttggccaaca tgaatatcaa ttgatttcaa tggagatttt ggaatcatca 600  
 tcatgtagtt agtttcatct ttttagttgt atatgatcct tttggaaagt aggatcaatg 660  
 catagataaa ttactaaat tttatgccat caaattagta atagtatgca ttattaatct 720  
 tctaatttat cttcaccata attaattctca ttgatgattc aatcttgtac ttccttaaca 780  
 tctatatact atatgggttt gaacctttta aaaaaaagaa aaaaaaaaaa aaaaaaaaaa 840  
 aaaaaaaaaa aaaaaaaaaa aa 862

<210> 22  
 <211> 151  
 <212> PRT  
 <213> Glycine max

<400> 22  
 Met Ala Ile Gly Phe Met Glu Val Gln Leu Val Lys Ala Lys Glu Leu  
 1 5 10 15  
 Cys Asp Thr Asp Phe Phe Gly Ser Met Asp Pro Tyr Val Val Ile Gln

20 25 30  
 Tyr Asn Gly Gln Glu Gln Arg Ser Ser Val Ala Lys Gly Gln Gly Asn  
 35 40 45  
 Asn Pro Val Trp Asn Glu Lys Phe Val Phe Lys Val Glu Tyr Pro Thr  
 50 55 60  
 Leu Ser Asn Ser Tyr Lys Ile Ile Leu Lys Ile Met Asp Lys Asp Leu  
 65 70 75 80  
 Leu Ser Ala Asp Asp Phe Val Gly Gln Ala Ile Val Tyr Val Glu Asp  
 85 90 95  
 Leu Leu Ala Ile Gly Val Glu Asp Gly Ala Ala Glu Leu Gln Pro Leu  
 100 105 110  
 Lys Tyr Arg Val Ile Arg Ala Asp Gln Ser Tyr Cys Gly Glu Ile Asp  
 115 120 125  
 Leu Gly Ile Thr Phe Lys Val Glu Glu Glu Phe Asn Gly Glu Ala Lys  
 130 135 140  
 Arg Gly Ser Lys Asp Ser Lys  
 145 150

<210> 23  
 <211> 860  
 <212> DNA  
 <213> Triticum aestivum

<400> 23  
 tccaaacgcg acctcatcag agcaagaccc ggaggaaaca aggagaggcc agagcggcct 60  
 gtcacaaggc aaaggacaga ggaggtgctt gttcaggtct cctgctagat ccggaggcga 120  
 tgggcagggg cgtgctggag gtgcatctcg tgcacgcaa gggcctcttc ggcagcgatt 180  
 tcctagggaa gatcgaccg tatgtaatcg tgcaataccg gagccaggag cgcaagagca 240  
 gcacctccag agatgagggg aggaaccgga gctggaacga ggtgttccgg ttccagatca 300  
 actcctctgc ggccaacggg cagcacaagc tcttctccg gatcatggac cagcacaact 360  
 tctccagcga cgacttctc ggccaagcga cgatcaacgt gaccgatctg atcagcaccg 420  
 gcatggagag cggcgcgctg cagctgaacg cggcaaagta cagcgttggtg tccgctgata 480  
 actcatacca cggcgagatc agagtaggcc tcacgttcac cgccaccaag gttgaagaag 540  
 acggagggca ggtcggaggc tggacgcaca gctctcgca gtagagcatg taacgtcctt 600  
 gcccttcgct cgtagcttta gtgttgatg ctatgatgtc cgtgactgaa tgatgtgatt 660  
 ccaagtgtat gtacgttgca cctgtagtag ctttttagaa gatgtatatg tactagtagc 720  
 cagaagtcag aactcgtagc aggctagagg cgtcaattcc gttaattaat tgtcgatttg 780  
 tggttcttat tttaggggga attgtgattc tggatgcgaa caccaaaaaa aaaaaaaaaa 840  
 aaaaaaaaaa aaaaaaaaaa 860

<210> 24  
 <211> 154  
 <212> PRT  
 <213> Triticum aestivum

<400> 24  
 Met Gly Arg Gly Val Leu Glu Val His Leu Val Asp Ala Lys Gly Leu  
 1 5 10 15  
 Phe Gly Ser Asp Phe Leu Gly Lys Ile Asp Pro Tyr Val Ile Val Gln  
 20 25 30  
 Tyr Arg Ser Gln Glu Arg Lys Ser Ser Thr Ser Arg Asp Glu Gly Arg

35

40

45

Asn Pro Ser Trp Asn Glu Val Phe Arg Phe Gln Ile Asn Ser Ser Ala  
 50 55 60

Ala Asn Gly Gln His Lys Leu Phe Leu Arg Ile Met Asp His Asp Asn  
 65 70 75 80

Phe Ser Ser Asp Asp Phe Leu Gly Gln Ala Thr Ile Asn Val Thr Asp  
 85 90 95

Leu Ile Ser Thr Gly Met Glu Ser Gly Ala Ser Gln Leu Asn Ala Ala  
 100 105 110

Lys Tyr Ser Val Val Ser Ala Asp Asn Ser Tyr His Gly Glu Ile Arg  
 115 120 125

Val Gly Leu Thr Phe Thr Ala Thr Lys Val Glu Glu Asp Gly Gly Gln  
 130 135 140

Val Gly Gly Trp Thr His Ser Ser Arg Glu  
 145 150

&lt;210&gt; 25

&lt;211&gt; 914

&lt;212&gt; DNA

&lt;213&gt; Oryza sativa

&lt;400&gt; 25

cttttgggaag aaaagatcac ccaaaaccct atattccata gttgagacac aagatttttt 60  
 gaagccaagt ttgcgcatta catcaaaggg ttcttttgat gcgaccaatg ctgtgaagag 120  
 tgtaactagc agtatctcta gcgcttcagg gaagcatgtc gctgacgata caagagaatt 180  
 tgttggagag ctgaacatta cagtggtaag aggtattcag ttggccgtca gagacatgct 240  
 aacgagcgat ccataatgttg ttctaacact tggggagcag aaagctcaaa ccaactgttaa 300  
 accgagtgcac ttgaaccag tatggaatga ggtgcttaag atatcaattc ctcgaaatta 360  
 tggacctctt aaacttgaag tatacgacca tgatacgttc tctgctgatg atatcatggg 420  
 ggaagcggag atagatcttc aaccaatgat cacagccgtc atggcctttg gagatccctc 480  
 gcgtgttggg gacatgcaaa ttggaaggtg gttcatgacc aaagacaatg ccctggtgaa 540  
 agatagcact gtcaatgttg tgcgggcaa ggtaaaacag gaagtgcacc taaagttgca 600  
 gaatgtagaa tcaggtgaga tggagttaga actggaatgg gttccaatac cctagattaa 660  
 taaagctcga ttggttctct gccaaaaaaa attactcaag aagcgtcagt tttgtaattt 720  
 aaatgaatgg cttcaaattc cgtgtactta ctgaatctct gtcttcaaca ttttggccac 780  
 ccgaacgaaa ttcgtaaaaa tgccattgta aaatatcatg ttgtaatcog tcggctgcac 840  
 tcacgaccaa ttatattatt ctttagtgaa gtgtgctttc aaccgttgt cataaaaaaa 900  
 aaaaaaaaaa aaaa 914

&lt;210&gt; 26

&lt;211&gt; 217

&lt;212&gt; PRT

&lt;213&gt; Oryza sativa

&lt;400&gt; 26

Phe Trp Lys Lys Arg Ser Pro Lys Thr Leu Tyr Ser Ile Val Glu Thr  
 1 5 10 15

Gln Asp Phe Leu Lys Pro Ser Leu Arg Ile Thr Ser Lys Gly Ser Phe  
 20 25 30

Asp Ala Thr Asn Ala Val Lys Ser Val Thr Ser Ser Ile Ser Ser Ala  
 35 40 45

Ser Gly Lys His Val Ala Asp Asp Thr Arg Glu Phe Val Gly Glu Leu  
50 55 60

Asn Ile Thr Val Val Arg Gly Ile Gln Leu Ala Val Arg Asp Met Leu  
65 70 75 80

Thr Ser Asp Pro Tyr Val Val Leu Thr Leu Gly Glu Gln Lys Ala Gln  
85 90 95

Thr Thr Val Lys Pro Ser Asp Leu Asn Pro Val Trp Asn Glu Val Leu  
100 105 110

Lys Ile Ser Ile Pro Arg Asn Tyr Gly Pro Leu Lys Leu Glu Val Tyr  
115 120 125

Asp His Asp Thr Phe Ser Ala Asp Asp Ile Met Gly Glu Ala Glu Ile  
130 135 140

Asp Leu Gln Pro Met Ile Thr Ala Val Met Ala Phe Gly Asp Pro Ser  
145 150 155 160

Arg Val Gly Asp Met Gln Ile Gly Arg Trp Phe Met Thr Lys Asp Asn  
165 170 175

Ala Leu Val Lys Asp Ser Thr Val Asn Val Val Ser Gly Lys Val Lys  
180 185 190

Gln Glu Val His Leu Lys Leu Gln Asn Val Glu Ser Gly Glu Met Glu  
195 200 205

Leu Glu Leu Glu Trp Val Pro Ile Pro  
210 215

<210> 27  
<211> 770  
<212> DNA  
<213> Oryza sativa

<400> 27  
ccacgcgtcc ggccctgtgca acatcatcat caagaagaag aagagatcaa cggcaagaag 60  
actagcgact agcgagagat cgatcgaaga gaagaggaga gatggtgcac gggaaagctgg 120  
aggctctcct cgtctgcgcc aagggcctcg aggacactga cttcttgaac gacatggacc 180  
cctacgtgat cctcacctgc cgcactcagg agcagaaaag cagcgttgca aaaggagcag 240  
gaagcgagcc tgaatggaac gagaccttcg tcttcaccgt ctccgacgat gttccacagc 300  
tcaatgtcaa gatcatggac agtcatgcct tctcagctga cgatttcgtc ggtgaagcaa 360  
acattcctct ggagcctgtg ttcttggaag gcagccttcc tccagccgtc caccgtgtcg 420  
tcaaggagga gaagtactgt ggagagatca aggttgctct caccttact ccagcagcgg 480  
aaactcgcca tcatcacaac cagcagaacg agggggaggg ttacagcagc tggaactgat 540  
tgctgtctac taatgagcat caacgagagg agatcttgtc tcaagaatta atgtgcttgt 600  
caacaatact ccgtgctatg atgtcctaag aactgaaaca tccatttata tgtatatccc 660  
agaccattga cttgctctgc ctaaattttg tatatttttt actacaaaga tgtgatggtg 720  
tgaaatccag aatattttta tcgaaaaaaa aaaaaaaaaa aaaaaaaaag 770

<210> 28  
<211> 145  
<212> PRT  
<213> Oryza sativa

<400> 28  
Met Val His Gly Lys Leu Glu Val Leu Leu Val Cys Ala Lys Gly Leu  
1 5 10 15

Glu Asp Thr Asp Phe Leu Asn Asp Met Asp Pro Tyr Val Ile Leu Thr  
20 25 30

Cys Arg Thr Gln Glu Gln Lys Ser Ser Val Ala Lys Gly Ala Gly Ser  
35 40 45

Glu Pro Glu Trp Asn Glu Thr Phe Val Phe Thr Val Ser Asp Asp Val  
50 55 60

Pro Gln Leu Asn Val Lys Ile Met Asp Ser Asp Ala Phe Ser Ala Asp  
65 70 75 80

Asp Phe Val Gly Glu Ala Asn Ile Pro Leu Glu Pro Val Phe Leu Glu  
85 90 95

Gly Ser Leu Pro Pro Ala Val His Arg Val Val Lys Glu Glu Lys Tyr  
100 105 110

Cys Gly Glu Ile Lys Val Ala Leu Thr Phe Thr Pro Ala Ala Glu Thr  
115 120 125

Arg His His His Asn His Glu Asn Glu Gly Glu Gly Tyr Ser Ser Trp  
130 135 140

Asn  
145

<210> 29  
<211> 958  
<212> DNA  
<213> Glycine max

<400> 29  
gcacagaaag aaaaaagttg gatccagcca aattccagct ccaatttgta actcactgct 60  
tcaggcattt ctggcacaat tttttccacc tttatttcaa ctttaagact ccacagaaag 120  
aagcatattc ctgagtcaaa tagttctgtc catatagaat ttgtgaagtg agagtccaac 180  
ctttcatttt caattttcaa agatgcctcg tggaacactt gaagttgttc tgatcagcgc 240  
caaaggaatc gatgacaatg attttctctc cagcatagat ctttatgtga ttctcacata 300  
cagggcacag gagaaaaaga gcaactgtgca agaagatgct ggatccaagc cacaatggaa 360  
tgagagcttt cttttcactg tctctgacag tgcttctgaa cttaatctga agataatgga 420  
taaagacaac tttagtcaag atgattgtct tggcgaggca accattcatt tagatccagt 480  
gtttgaagcc ggtagcattc cagaaactgc ttacaagggt gtgaaggacg aagaatattg 540  
tggtgagatt aaggtggtc tcactttcac tgctgagaga aatgaggagc agggttatga 600  
tgcacctgaa gagagctatg gtggatggaa agaatccagt ggggaatatt aaagtgaag 660  
aagaatttac atacttcaat ggccagactt acctttataa tgaaaaataa gcagtttttg 720  
tgtcactctt aggcaatttc cattattgtg ttttctgggt tgaagatcca atagtgttgt 780  
gcttttaggt tgcattcctc cttttggata ttaaagtaca ttatgcttga tatattatct 840  
tttatgcac agttaaacat tagaagagca gtgctatttt atttaaaaaa aaaaaaaaaa 900  
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 958

<210> 30  
<211> 149  
<212> PRT  
<213> Glycine max

<400> 30  
Met Pro Arg Gly Thr Leu Glu Val Val Leu Ile Ser Ala Lys Gly Ile  
1 5 10 15

Asp Asp Asn Asp Phe Leu Ser Ser Ile Asp Pro Tyr Val Ile Leu Thr



20 25 30  
 Tyr Arg Ala Gln Glu Lys Lys Ser Thr Val Gln Glu Asp Ala Gly Ser  
 35 40 45  
 Lys Pro Gln Trp Asn Glu Ser Phe Leu Phe Thr Val Ser Asp Ser Ala  
 50 55 60  
 Ser Glu Leu Asn Leu Lys Ile Met Asp Lys Asp Asn Phe Ser Gln Asp  
 65 70 75 80  
 Asp Cys Leu Gly Glu Ala Thr Ile His Leu Asp Pro Val Phe Glu Ala  
 85 90 95  
 Gly Ser Ile Pro Glu Thr Ala Tyr Lys Val Val Lys Asp Glu Glu Tyr  
 100 105 110  
 Cys Gly Glu Ile Lys Val Ala Leu Thr Phe Thr Ala Glu Arg Asn Glu  
 115 120 125  
 Glu Gln Gly Tyr Asp Ala Pro Glu Glu Ser Tyr Gly Gly Trp Lys Glu  
 130 135 140  
 Ser Ser Gly Glu Tyr  
 145

<210> 31  
 <211> 695  
 <212> DNA  
 <213> Triticum aestivum

<400> 31  
 gcacgaggag agatccaaga ctaggccggc cggccggagg agatcgagaa ggaggaggag 60  
 acatggtgcg cgggaagctg gaggtgctgc tcgtctccgc caagggcctc gacgactccg 120  
 atttcttcaa tagcatggac ccgtacgtga tcctcacctg ccgcagccac gacgagaaga 180  
 gcaccgtcgc atcaggagca gggagcgagc ctgagtggaa cgagaccttc gtcttcgccc 240  
 tctccggcga cgctccggag ctccaggtca agatcatgga cagcgacgcc ctctcgcccg 300  
 acgacctcgt cggagaagca tgtatcccgc tggaggctgt gctccaggag ggcagcctgc 360  
 cgccggccgt gcaccgggtc gtcaaggacg aggagtaccg cggggagatc aagatcgccg 420  
 tcaccttcac cccggcagag gaaaacgagg aggaggagga gagctacggc ggctggaatc 480  
 agtccacctg aaaaaggcca gcgagccagc aagatggtgc tgtatgtctg actgtcataa 540  
 tggatagaaa ggctttggat atccttgatg tgtgtgacag acagggcatt caggaaaacg 600  
 agtaaaaata ggggaaatat gtatcgatgc atgcatgaag tactaatcaa gcaattcacc 660  
 gcatcgtttt gtattgcaaa aaaaaaaaaa aaaaa 695

<210> 32  
 <211> 142  
 <212> PRT  
 <213> Triticum aestivum

<400> 32  
 Met Val Arg Gly Lys Leu Glu Val Leu Leu Val Ser Ala Lys Gly Leu  
 1 5 10 15  
 Asp Asp Ser Asp Phe Phe Asn Ser Met Asp Pro Tyr Val Ile Leu Thr  
 20 25 30  
 Cys Arg Ser His Glu Gln Lys Ser Thr Val Ala Ser Gly Ala Gly Ser  
 35 40 45  
 Glu Pro Glu Trp Asn Glu Thr Phe Val Phe Ala Val Ser Gly Asp Ala

50

55

60

Pro Glu Leu Arg Val Lys Ile Met Asp Ser Asp Ala Leu Ser Ala Asp  
65 70 75 80

Asp Leu Val Gly Glu Ala Cys Ile Pro Leu Glu Ala Val Leu Gln Glu  
85 90 95

Gly Ser Leu Pro Pro Ala Val His Arg Val Val Lys Asp Glu Glu Tyr  
100 105 110

Arg Gly Glu Ile Lys Ile Ala Leu Thr Phe Thr Pro Ala Glu Glu Asn  
115 120 125

Glu Glu Glu Glu Ser Tyr Gly Gly Trp Asn Gln Ser Thr  
130 135 140

&lt;210&gt; 33

&lt;211&gt; 617

&lt;212&gt; DNA

&lt;213&gt; Zea mays

&lt;220&gt;

&lt;221&gt; unsure

&lt;222&gt; (421)

&lt;223&gt; n = A, C, G or T

&lt;400&gt; 33

cacgccgcct ccatgtgggt ggggaggcaa acgcgttcgt ccatctctga aactcaaacy 60  
ccttgtattg gagcatacta caggagtact tctgtacaaa tataaatacc cctggcgagt 120  
tggtgtgggt ctatctcgca atcgaggcgt tttttttctg cttecgtaagt tcgtggtcga 180  
tccagcgagc gagcgagcag accggcggcc aaccgcggag ggagagatgg cgcagggggac 240  
gctggagggtg cttctcgtcg gagccagggg cctcgagaac accgattacc tgagcaacat 300  
ggacccctac gcgcttctgc aatgtcgtc ccacgagcag aagagcagcg tcgcatctgg 360  
caaaggctgt gaacctgagt ggaacgagac cttcgtgttc accgtctcca acggcgacaca 420  
ngagctgttc atcaagctcc tggacagtga cgggtggcact gatgacgatt ttgttggtga 480  
agcaacgatt cctctggaag ccagttttaca cggaaggaa gcattccttc cgactgttta 540  
caatgttgtg aaagacgaag aataccgcgg agaaatcaaa gttggcctca cgttcaactcc 600  
agagtaaac catctca 617

&lt;210&gt; 34

&lt;211&gt; 202

&lt;212&gt; PRT

&lt;213&gt; Zea mays

&lt;220&gt;

&lt;221&gt; UNSURE

&lt;222&gt; (140)

&lt;223&gt; Xaa = any amino acid

&lt;400&gt; 34

Thr Pro Pro Pro Cys Gly Trp Gly Gly Lys Arg Val Arg Pro Ser Leu  
1 5 10 15

Lys Leu Lys Arg Leu Val Leu Glu His Thr Thr Gly Val Leu Leu Tyr  
20 25 30

Lys Tyr Lys Tyr Pro Trp Arg Val Gly Leu Gly Leu Ser Arg Asn Arg  
35 40 45

Gly Val Phe Phe Leu Leu Arg Lys Phe Val Val Asp Pro Ala Ser Glu

50

55

60

Arg Ala Asp Arg Arg Pro Thr Ala Glu Gly Glu Met Ala Gln Gly Thr  
65 70 75 80

Leu Glu Val Leu Leu Val Gly Ala Arg Gly Leu Glu Asn Thr Asp Tyr  
85 90 95

Leu Ser Asn Met Asp Pro Tyr Ala Leu Leu Gln Cys Arg Ser His Glu  
100 105 110

Gln Lys Ser Ser Val Ala Ser Gly Lys Gly Cys Glu Pro Glu Trp Asn  
115 120 125

Glu Thr Phe Val Phe Thr Val Ser Asn Gly Ala Xaa Glu Leu Phe Ile  
130 135 140

Lys Leu Leu Asp Ser Asp Gly Gly Thr Asp Asp Asp Phe Val Gly Glu  
145 150 155 160

Ala Thr Ile Pro Leu Glu Ala Ser Leu His Gly Lys Glu Ala Phe Leu  
165 170 175

Pro Thr Val Tyr Asn Val Val Lys Asp Glu Glu Tyr Arg Gly Glu Ile  
180 185 190

Lys Val Gly Leu Thr Phe Thr Pro Glu Val  
195 200

<210> 35  
<211> 544  
<212> DNA  
<213> Zea mays

<220>  
<221> unsure  
<222> (415)  
<223> n = A, C, G or T

<220>  
<221> unsure  
<222> (478)  
<223> n = A, C, G or T

<220>  
<221> unsure  
<222> (494)  
<223> n = A, C, G or T

<220>  
<221> unsure  
<222> (509)  
<223> n = A, C, G or T

<220>  
<221> unsure  
<222> (515)  
<223> n = A, C, G or T

<220>  
<221> unsure

<222> (531)..(532)

<223> n = A, C, G or T

<220>

<221> unsure

<222> (542)

<223> n = A, C, G or T

<400> 35

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gacatggtgc acgggacgct ggaagtgctg ctogttgggg ccaagggcct cgagaacacc 120
gattacctct gtaacatgga tccgtatgca attctcaagt gccgttcaca ggagcagaag 180
agcagtattg caactggaaa aggaactacc cctgagtggg atgaaaactt tatcttcact 240
gtgtctgacc ggacaacaga cttggtaatc aagcttatgg acagtgatac aggcacagca 300
gatgactttg ttggtgaagc aacgattcca ttggaagcag tgtatactga aaggagcatt 360
ccaccaacac tctataatgt tgtgaaaggt gaaaaatact gcgggggaaat caaantggtc 420
tcacattcac tcctgaggat actcgcaagc gggctctccaa aggacttcgt ggtggaanca 480
tcattctaag ctantcttta gggtcacana cacancacaa tcatcgcttg nncctcaccg 540
tnat
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<210> 36

<211> 130

<212> PRT

<213> Zea mays

<220>

<221> UNSURE

<222> (118)

<223> Xaa = any amino acid

<400> 36

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Met Val His Gly Thr Leu Glu Val Leu Leu Val Gly Ala Lys Gly Leu
  1              5              10              15

Glu Asn Thr Asp Tyr Leu Cys Asn Met Asp Pro Tyr Ala Ile Leu Lys
      20              25              30

Cys Arg Ser Gln Glu Gln Lys Ser Ser Ile Ala Thr Gly Lys Gly Thr
      35              40              45

Thr Pro Glu Trp Asn Glu Asn Phe Ile Phe Thr Val Ser Asp Arg Thr
      50              55              60

Thr Asp Leu Val Ile Lys Leu Met Asp Ser Asp Thr Gly Thr Ala Asp
      65              70              75              80

Asp Phe Val Gly Glu Ala Thr Ile Pro Leu Glu Ala Val Tyr Thr Glu
      85              90              95

Arg Ser Ile Pro Pro Thr Leu Tyr Asn Val Val Lys Gly Glu Lys Tyr
      100             105             110

Cys Gly Glu Ile Lys Xaa Gly Leu Thr Phe Thr Pro Glu Asp Thr Arg
      115             120             125

Lys Arg
      130
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<210> 37

<211> 459

<212> DNA

<213> Triticum aestivum

<220>

<221> unsure

<222> (435)

<223> n = A, C, G or T

<400> 37

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gccgagcttt ccatttttca actcctagtc ctatacatatc agcgggaaccc cgggggctcgg 60
atcggatcta cagcaattag tctcgacctt cagtcgtgcc gcctgctcat cagcatataa 120
ttcctgatcg agcagacggg agaggaaggg gagatcaggc cgggagagaa gatggcgag 180
gggacgctgg aggtgctgct cgtgggagcc aagggcctcg agaacaccga ctacctctgc 240
aacatggacc cgtacgcggg tctaaaatgc acctcgcagg agcaaaagag caccgtcgcc 300
tctggaaagg gaagtgatcc tgagtggaaac gaaacctttg tgttcaccgt ctctgagaat 360
gcaactgagc ttgtcatcaa gctactggac agtgatggtg gcacggacga cgacagcgtt 420
ggtgaagcaa cgatncattg gatggagtgt aactgaag 459

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<210> 38

<211> 87

<212> PRT

<213> Triticum aestivum

<400> 38

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Met Ala Gln Gly Thr Leu Glu Val Leu Leu Val Gly Ala Lys Gly Leu
 1              5              10              15

Glu Asn Thr Asp Tyr Leu Cys Asn Met Asp Pro Tyr Ala Val Leu Lys
      20              25              30

Cys Thr Ser Gln Glu Gln Lys Ser Thr Val Ala Ser Gly Lys Gly Ser
      35              40              45

Asp Pro Glu Trp Asn Glu Thr Phe Val Phe Thr Val Ser Glu Asn Ala
      50              55              60

Thr Glu Leu Val Ile Lys Leu Leu Asp Ser Asp Gly Gly Thr Asp Asp
      65              70              75              80

Asp Ser Val Gly Glu Ala Thr
      85

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<210> 39

<211> 417

<212> DNA

<213> Oryza sativa

<400> 39

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atcgtcaact cagctcctct ctttcttccc ctcccccgct cctccgcgag acgacccgcg 60
cccgtagcca tccatgtcga tacaaggcca gatcctcgaa gtcagagtca ctgggtgcag 120
gaagctgagg gacacggagt tcttcacggc gcaggatccc tacgtctgca tcgagtatgc 180
caccaacaag ttccgcaccc gcacctgcac cgatggggga aggaacccta cttttgacga 240
gaagtttcat atacctctca ttgaggggct tcgtgagcta accgtcacag tgtggaacag 300
caacacgctc acccatgatg atttcattgg caatggcagg gtgcaagctg cataaggtgc 360
ttacgcgtgg ctatgatgat gcctcaaggg ccctccagac acgccatatt aggtctg 417

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<210> 40

<211> 83

<212> PRT

<213> Oryza sativa

<400> 40

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 1 5 10 15  
 Phe Thr Arg Gln Asp Pro Tyr Val Cys Ile Glu Tyr Ala Thr Asn Lys  
 20 25 30  
 Phe Arg Thr Arg Thr Cys Thr Asp Gly Gly Arg Asn Pro Thr Phe Asp  
 35 40 45  
 Glu Lys Phe His Ile Pro Leu Ile Glu Gly Leu Arg Glu Leu Thr Val  
 50 55 60  
 Thr Val Trp Asn Ser Asn Thr Leu Thr His Asp Asp Phe Ile Gly Asn  
 65 70 75 80

Gly Arg Val

<210> 41  
 <211> 550  
 <212> DNA  
 <213> Glycine max

<220>  
 <221> unsure  
 <222> (534)  
 <223> n = A, C, G or T

<400> 41  
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 ctctctctct tcctctgact ccatgtcgtc gataacgggc atccagggcc aacctcttga 120  
 ggttacgggtg gtttcgtgct ccaagttgaa ggacacagaa tggatttcaa ggcaagatcc 180  
 gtacgtttgt gttgagtatg gcagcacaaa gttccgaacc agaacctgca cagacggcgg 240  
 aaaaaatccg gtattccaag agaagttcat cttccccctc attgaaggcc ttcgggagct 300  
 caatgtcctt gtttgaaca gcaatactct caccttggac gattttatag gaagcggaaa 360  
 gattcaattg cacaagggtc tctctcaagg cttcgatgac tctgcttggc cacttcagac 420  
 caaaactggc agatacgtg gtgaagtcaa agtcatattg cattacgcaa ttgcaaataca 480  
 tcaaaggcat aaatcagtgt caagccatgc tccatcaaca cctccgtatg tggnaacaac 540  
 aactcctccc 550

<210> 42  
 <211> 116  
 <212> PRT  
 <213> Glycine max

<400> 42  
 Met Ser Ser Ile Thr Gly Ile Gln Gly Gln Pro Leu Glu Val Thr Val  
 1 5 10 15  
 Val Ser Cys Ser Lys Leu Lys Asp Thr Glu Trp Ile Ser Arg Gln Asp  
 20 25 30  
 Pro Tyr Val Cys Val Glu Tyr Gly Ser Thr Lys Phe Arg Thr Arg Thr  
 35 40 45  
 Cys Thr Asp Gly Gly Lys Asn Pro Val Phe Gln Glu Lys Phe Ile Phe  
 50 55 60  
 Pro Leu Ile Glu Gly Leu Arg Glu Leu Asn Val Leu Val Trp Asn Ser  
 65 70 75 80  
 Asn Thr Leu Thr Leu Asp Asp Phe Ile Gly Ser Gly Lys Ile Gln Leu

85

90

95

His Lys Val Leu Ser Gln Gly Phe Asp Asp Ser Ala Trp Pro Leu Gln  
 100 105 110

Thr Lys Thr Gly  
 115

<210> 43  
 <211> 424  
 <212> DNA  
 <213> Zea mays

<220>  
 <221> unsure  
 <222> (169)..(170)  
 <223> n = A, C, G or T

<220>  
 <221> unsure  
 <222> (172)..(173)  
 <223> n = A, C, G or T

<220>  
 <221> unsure  
 <222> (178)..(179)..(180)  
 <223> n = A, C, G or T

<220>  
 <221> unsure  
 <222> (183)  
 <223> n = A, C, G or T

<400> 43  
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 cgccacctgg aggagaggac agcgcgccag ggagggggag gaggaagaag aacatgggga 120  
 agggcgctct gaaggtgcac ctgctcgacg ccaaggggct ctccggcann gnnttctnnn 180  
 ggnagctgga cccctacgtg atcatgcagt accggagcca ggagcgcaag agcagcgctcg 240  
 cccgagacca aggaagggaac ccgtgctgga acgaggtggt caagttccag atcaactcgg 300  
 ccgcgggccaa cgtgcagcac aagctcatcc tccggatcat ggaccacgac aacttctcca 360  
 gcgacgactt ctccggcgagg cgacgatcga cgtgacggac atcgtcagcc tgggcgcccga 420  
 gcgc 424

<210> 44  
 <211> 85  
 <212> PRT  
 <213> Zea mays

<220>  
 <221> UNSURE  
 <222> (18)..(19)  
 <223> Xaa = any amino acid

<220>  
 <221> UNSURE  
 <222> (21)..(22)..(23)  
 <223> Xaa = any amino acid

<400> 44  
 Gly Lys Gly Val Leu Lys Val His Leu Val Asp Ala Lys Gly Leu Ser  
 1 5 10 15

Gly Xaa Xaa Phe Xaa Xaa Xaa Leu Asp Pro Tyr Val Ile Met Gln Tyr  
 20 25 30  
 Arg Ser Gln Glu Arg Lys Ser Ser Val Ala Arg Asp Gln Gly Arg Asn  
 35 40 45  
 Pro Cys Trp Asn Glu Val Phe Lys Phe Gln Ile Asn Ser Ala Ala Ala  
 50 55 60  
 Asn Val Gln His Lys Leu Ile Leu Arg Ile Met Asp His Asp Asn Phe  
 65 70 75 80  
 Ser Ser Asp Asp Phe  
 85

<210> 45  
 <211> 548  
 <212> DNA  
 <213> Glycine max

<220>  
 <221> unsure  
 <222> (291)  
 <223> n = A, C, G or T

<220>  
 <221> unsure  
 <222> (349)  
 <223> n = A, C, G or T

<220>  
 <221> unsure  
 <222> (417)  
 <223> n = A, C, G or T

<220>  
 <221> unsure  
 <222> (437)  
 <223> n = A, C, G or T

<220>  
 <221> unsure  
 <222> (446)  
 <223> n = A, C, G or T

<220>  
 <221> unsure  
 <222> (486)  
 <223> n = A, C, G or T

<220>  
 <221> unsure  
 <222> (492)  
 <223> n = A, C, G or T

<220>  
 <221> unsure  
 <222> (506)  
 <223> n = A, C, G or T



<220>  
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 <222> (525)  
 <223> n = A, C, G or T

<220>  
 <221> unsure  
 <222> (528)  
 <223> n = A, C, G or T

<220>  
 <221> unsure  
 <222> (544)  
 <223> n = A, C, G or T

<400> 45  
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 gagaaagaga tggcaattgg gttcatggag gtgcagcttg tgaaagcaaa ggagttgtgt 120  
 gacactgatt tctttggtag tatggaccgc tatgttgtga tacaatacaa cggccaagag 180  
 caaaggagta gtgttgctaa gggacagggc aataatccgg tatggaatga gaaatttgtg 240  
 ttcaaggtag aatatacctac actgagtaat tcatacaaga ttatcttaaa natcatggac 300  
 aaggatcttt tatctgcaga tgactttggt ggtcaagcca tagtcctang tgggaagatt 360  
 tattagccat aaggggtaga ggatgggtgc ggctgagcta caacctocta aagtacnaga 420  
 gtaattccgt gcagatnaat ccttantggt ggagaaattg atcttgggat aactttttaa 480  
 gggggnaaga angagttcaa tggagnaagc ctaaaccaag gatcnaangg acagtaaatt 540  
 agtntttc 548

<210> 46  
 <211> 89  
 <212> PRT  
 <213> Glycine max

<220>  
 <221> UNSURE  
 <222> (71)  
 <223> Xaa = ANY AMINO ACID

<400> 46  
 Gly Phe Met Glu Val Gln Leu Val Lys Ala Lys Glu Leu Cys Asp Thr  
 1 5 10 15  
 Asp Phe Phe Gly Ser Met Asp Pro Tyr Val Val Ile Gln Tyr Asn Gly  
 20 25 30  
 Gln Glu Gln Arg Ser Ser Val Ala Lys Gly Gln Gly Asn Asn Pro Val  
 35 40 45  
 Trp Asn Glu Lys Phe Val Phe Lys Val Glu Tyr Pro Thr Leu Ser Asn  
 50 55 60  
 Ser Tyr Lys Ile Ile Leu Xaa Ile Met Asp Lys Asp Leu Leu Ser Ala  
 65 70 75 80  
 Asp Asp Phe Val Gly Gln Ala Ile Val  
 85

<210> 47  
 <211> 473  
 <212> DNA  
 <213> Triticum aestivum

<220>  
 <221> unsure  
 <222> (296)  
 <223> n=a,c,g or t

<220>  
 <221> unsure  
 <222> (473)  
 <223> n=a,c,g or t

<400> 47  
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 gtcacaaggc aaggacagag gaggtgcttg ttcagggtctc ctgctagatc cggaggcgat 120  
 gggcaggggc tgctggaggt gcatctcgtc gacgccaaagg gcctcttcgg cagcgatttc 180  
 ctaggaagat cgacccgtat gtaatcgtgc aataccggag ccaggagcgc aagagcagca 240  
 ctccagagat gaggggagga acccgagctg gaacgaggtg ttccgggttc agatcnctcc 300  
 tctgcggcca acgggcagca caagctcttc ctccggatca tggaccacga catcttctcc 360  
 agcgacgact tcctcggcca agcgacgac aacgtgaccg atctgatcag accggcatgg 420  
 agaagcgggc gcgtcgcagc tgaacgcggc aaagtacaac gttgttgtec gcn 473

<210> 48  
 <211> 99  
 <212> PRT  
 <213> Triticum aestivum

<220>  
 <221> UNSURE  
 <222> (24)  
 <223> Xaa = ANY AMINO ACID

<220>  
 <221> UNSURE  
 <222> (47)  
 <223> Xaa = ANY AMINO ACID

<220>  
 <221> UNSURE  
 <222> (62)  
 <223> Xaa = ANY AMINO ACID

<400> 48  
 Gly Gln Gly Leu Leu Glu Val His Leu Val Asp Ala Lys Gly Leu Phe  
     1                    5                    10                    15  
 Gly Ser Asp Phe Leu Gly Arg Xaa Asp Pro Tyr Val Ile Val Gln Tyr  
           20                    25                    30  
 Arg Ser Gln Glu Arg Lys Ser Ser Thr Pro Glu Met Arg Gly Xaa Gly  
           35                    40                    45  
 Glu Glu Pro Glu Leu Glu Arg Gly Val Pro Val Pro Asp Xaa Ser Ser  
       50                    55                    60  
 Ala Ala Asn Gly Gln His Lys Leu Phe Leu Arg Ile Met Asp His Asp  
       65                    70                    75                    80  
 Ile Phe Ser Ser Asp Asp Phe Leu Gly Gln Ala Thr Ile Asn Val Thr  
                     85                    90                    95  
 Asp Leu Ile

<210> 49  
 <211> 465  
 <212> DNA  
 <213> Oryza sativa

<400> 49  
 aaagatcacc caaaacccta tattccatag ttgagacaca agattttttg aagccaagtt 60  
 tgcgcattac atcaaagggt tcttttgatg cgaccaatgc tgtgaagagt gtaactagca 120  
 gtatctctag cgcttcaggg aagcatgtcg ctgacgatac aagagaattt gttggagagc 180  
 tgaacattac agtggttaaga ggtattcaag ttggccgtca gagacatgct aacgagcgat 240  
 ccatatgttg ttctaacact tggggagcag aaagctcaaa ccactgttaa accgagtgac 300  
 ttgaaccag tatggaatga ggtgcttaag atatcaattc ctcgaaatta tggacctctt 360  
 aaacttgaag tatacgacca tgatacgttc tctgctgatg atatcatggg ggaagcggag 420  
 atagatcttc aaccaatgat cacagccgtc atggcctttg gagaa 465

<210> 50  
 <211> 31  
 <212> PRT  
 <213> Oryza sativa

<400> 50  
 Val Val Leu Thr Leu Gly Glu Gln Lys Ala Gln Thr Thr Val Lys Pro  
 1 5 10 15

Ser Asp Leu Asn Pro Val Trp Asn Glu Val Leu Lys Ile Ser Ile  
 20 25 30

<210> 51  
 <211> 390  
 <212> DNA  
 <213> Oryza sativa

<220>  
 <221> unsure  
 <222> (43)  
 <223> n=a,c,g or t

<220>  
 <221> unsure  
 <222> (204)  
 <223> n=a,c,g or t

<220>  
 <221> unsure  
 <222> (301)  
 <223> n=a,c,g or t

<220>  
 <221> unsure  
 <222> (347)  
 <223> n=a,c,g or t

<220>  
 <221> unsure  
 <222> (373)  
 <223> n=a,c,g or t

<400> 51  
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 gcgagagatc gatcgaagag aagaggagag atggtgcacg ggaagctgga ggtcctcctc 120

gtctgcgcca agggcctcga ggacactgac ttcttgaacg acatggaccc ctacgtgac 180  
 ctcacctgcc gcactcagga gcangaaaag cagcggttgca aaaggagcag gaagcgagcc 240  
 tgaatggaac gagaccttcg tcttcaccgt ctccgacgat gttccacagc tcaatgtcaa 300  
 ngatcatgga caagtgatgg ccttctcaag ctgacgattt cggtcnngt gaagcaaaca 360  
 attcctctgg gangcctgtg ttcttgggaa 390

<210> 52  
 <211> 69  
 <212> PRT  
 <213> Oryza sativa

<400> 52  
 Met Val His Gly Lys Leu Glu Val Leu Leu Val Cys Ala Lys Gly Leu  
           1                  5                  10                  15  
 Glu Asp Thr Asp Phe Leu Asn Asp Met Asp Pro Tyr Val Ile Leu Thr  
                   20                  25                  30  
 Cys Arg Thr Gln Glu Gln Lys Ser Ser Val Ala Lys Gly Ala Gly Ser  
                   35                  40                  45  
 Glu Pro Glu Trp Asn Glu Thr Phe Val Phe Thr Val Ser Asp Asp Val  
           50                  55                  60  
 Pro Gln Leu Asn Val  
           65

<210> 53  
 <211> 489  
 <212> DNA  
 <213> Glycine max

<220>  
 <221> unsure  
 <222> (417)  
 <223> n=a,c,g or t

<220>  
 <221> unsure  
 <222> (428)  
 <223> n=a,c,g or t

<220>  
 <221> unsure  
 <222> (452)  
 <223> n=a,c,g or t

<220>  
 <221> unsure  
 <222> (482)  
 <223> n=a,c,g or t

<400> 53  
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 catttctggc acaatttttt ccacctttat ttcaacttta agactccaca gaaagaagca 120  
 tattcttgag tcaaatagtt ctgtccatat agaatttgtg aagtgagagt ccaacctttc 180  
 attttcaatt ttcaaagatg cctcgtggaa cacttgaagt tgttctgac agcgccaaag 240  
 gaatcgatga caatgatttt ctctccagca tagatoccta tgtgattctc acatacaggg 300  
 cacaggagaa aaagagcact gtgcaagaaa gatgctggat ccaagccaca atggaatgag 360  
 agctttcttt tcaactgtctc tgacagtgtc tctgaactta atctgaagat aatgggntaa 420  
 agacaacntt agtcaaagat ggttggcctg gngaggggaa caatcaatta gattcaagt 480

gnttggagg

489

<210> 54  
 <211> 42  
 <212> PRT  
 <213> Glycine max

<400> 54  
 Met Pro Arg Gly Thr Leu Glu Val Val Leu Ile Ser Ala Lys Gly Ile  
           1                  5                  10                  15

Asp Asp Asn Asp Phe Leu Ser Ser Ile Asp Pro Tyr Val Ile Leu Thr  
                   20                          25                          30

Tyr Arg Ala Gln Glu Lys Lys Ser Thr Val  
                   35                          40

<210> 55  
 <211> 523  
 <212> DNA  
 <213> Triticum aestivum

<220>  
 <221> unsure  
 <222> (401)  
 <223> n=a,c,g or t

<220>  
 <221> unsure  
 <222> (407)  
 <223> n=a,c,g or t

<220>  
 <221> unsure  
 <222> (449)  
 <223> n=a,c,g or t

<220>  
 <221> unsure  
 <222> (456)..(457)  
 <223> n=a,c,g or t

<220>  
 <221> unsure  
 <222> (493)  
 <223> n=a,c,g or t

<220>  
 <221> unsure  
 <222> (497)  
 <223> n=a,c,g or t

<220>  
 <221> unsure  
 <222> (512)  
 <223> n=a,c,g or t

<400> 55  
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 gcgcgggaag ctggaggtgc tgctcgtctc cgccaagggc ctcgacgact cggatttctt 120  
 caatagcatg gaccggtacg tgatcctcac ctgccgcagc caccgacaga agagcaccgt 180

cgcatcagga gcagggagcg agcctgagtg gaacgagacc ttctgtcttcg ccgtctccgg 240  
 cgacgctccg gagctcaggg tcaagatcat ggacagcgac gccctctcgg ccgacgacct 300  
 cgtcggagaa gcatgtatcc cgctggaggc tgtgtctccag gagggcagcc tgccgcgggc 360  
 cgtgcaccgg gtctcaagga cgaggagtac cgcggggaat naagatngcg ctcaacttcac 420  
 ccggcagagg aaaacaggag gaggaggana ctacgnnggt ggatcatcac tgaaaaggca 480  
 cgagcacaaa tgngttnttt acgtaaaagg anaaaggttt gat 523

<210> 56

<211> 28

<212> PRT

<213> Triticum aestivum

<400> 56

Met Val His Gly Lys Leu Glu Val Leu Leu Val Ser Ala Lys Gly Leu  
 1 5 10 15

Glu Asp Thr Asp Phe Leu Asn Asn Met Asp Pro Phe  
 20 25